IFWO

```
 1 <110> APPLICANT: ProChon Biotech, Ltd.
 2        MorphoSys AG
 3        Yayon, Avner
 4        Thomassen-Wolf, Elisabeth
 5        Rom, Eran
 6        Borges, Eric
 7 <120> TITLE OF INVENTION: ANTIBODIES THAT BLOCK RECEPTOR PROTEIN TYROSINE KINASE
ACTIVATION
 8 <130> FILE REFERENCE: 81408-4400
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/734,661A
10 <141> CURRENT FILING DATE: 2003-12-15
11 <150> PRIOR APPLICATION NUMBER: US 60/299,187
12 <151> PRIOR FILING DATE: 2001-06-20
13 <150> PRIOR APPLICATION NUMBER: PCT/IL02/00494
14 <151> PRIOR FILING DATE: 2002-06-20
15 <160> NUMBER OF SEQ ID NOS: 106
16 <170> SOFTWARE: PatentIn version 3.2
18 <210> SEQ ID NO: 1
19 <211> LENGTH: 806
20 <212> TYPE: PRT
21 <213> ORGANISM: Homo sapiens
22 <300> PUBLICATION INFORMATION:
23 <308> DATABASE ACCESSION NO: np_000133
24 <309> DATABASE ENTRY DATE: 2001-02-21
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31        Gly Arg Ala Ala Glu Val Pro Gly Pro Glu Pro Gly Gln Gln Glu Gln
32                    35                  40                  45
33        Leu Val Phe Gly Ser Gly Asp Ala Val Glu Leu Ser Cys Pro Pro Pro
34            50                  55                  60
35        Gly Gly Gly Pro Met Gly Pro Thr Val Trp Val Lys Asp Gly Thr Gly
36        65                  70                  75                  80
37        Leu Val Pro Ser Glu Arg Val Leu Val Gly Pro Gln Arg Leu Gln Val
38                        85                  90                  95
39        Leu Asn Ala Ser His Glu Asp Ser Gly Ala Tyr Ser Cys Arg Gln Arg
40                        100                 105                 110
41        Leu Thr Gln Arg Val Leu Cys His Phe Ser Val Arg Val Thr Asp Ala
42                    115                 120                 125
43        Pro Ser Ser Gly Asp Asp Glu Asp Gly Glu Asp Glu Ala Glu Asp Thr
44                    130                 135                 140
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45       Gly Val Asp Thr Gly Ala Pro Tyr Trp Thr Arg Pro Glu Arg Met Asp
46       145                 150                 155                 160
47       Lys Lys Leu Leu Ala Val Pro Ala Ala Asn Thr Val Arg Phe Arg Cys
48                       165                 170                 175
49       Pro Ala Ala Gly Asn Pro Thr Pro Ser Ile Ser Trp Leu Lys Asn Gly
50                   180                 185                 190
51       Arg Glu Phe Arg Gly Glu His Arg Ile Gly Gly Ile Lys Leu Arg His
52               195                 200                 205
53       Gln Gln Trp Ser Leu Val Met Glu Ser Val Val Pro Ser Asp Arg Gly
54           210                 215                 220
55       Asn Tyr Thr Cys Val Val Glu Asn Lys Phe Gly Ser Ile Arg Gln Thr
56       225                 230                 235                 240
57       Tyr Thr Leu Asp Val Leu Glu Arg Ser Pro His Arg Pro Ile Leu Gln
58                   245                 250                 255
59       Ala Gly Leu Pro Ala Asn Gln Thr Ala Val Leu Gly Ser Asp Val Glu
60                   260                 265                 270
61       Phe His Cys Lys Val Tyr Ser Asp Ala Gln Pro His Ile Gln Trp Leu
62               275                 280                 285
63       Lys His Val Glu Val Asn Gly Ser Lys Val Gly Pro Asp Gly Thr Pro
64           290                 295                 300
65       Tyr Val Thr Val Leu Lys Thr Ala Gly Ala Asn Thr Thr Asp Lys Glu
66       305                 310                 315                 320
67       Leu Glu Val Leu Ser Leu His Asn Val Thr Phe Glu Asp Ala Gly Glu
68                   325                 330                 335
69       Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Phe Ser His His Ser Ala
70                   340                 345                 350
71       Trp Leu Val Val Leu Pro Ala Glu Glu Glu Leu Val Glu Ala Asp Glu
72               355                 360                 365
73       Ala Gly Ser Val Tyr Ala Gly Ile Leu Ser Tyr Gly Val Gly Phe Phe
74           370                 375                 380
75       Leu Phe Ile Leu Val Val Ala Ala Val Thr Leu Cys Arg Leu Arg Ser
76       385                 390                 395                 400
77       Pro Pro Lys Lys Gly Leu Gly Ser Pro Thr Val His Lys Ile Ser Arg
78                   405                 410                 415
79       Phe Pro Leu Lys Arg Gln Val Ser Leu Glu Ser Asn Ala Ser Met Ser
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83       Pro Thr Leu Ala Asn Val Ser Glu Leu Glu Leu Pro Ala Asp Pro Lys
84           450                 455                 460
85       Trp Glu Leu Ser Arg Ala Arg Leu Thr Leu Gly Lys Pro Leu Gly Glu
86       465                 470                 475                 480
87       Gly Cys Phe Gly Gln Val Val Met Ala Glu Ala Ile Gly Ile Asp Lys
88                   485                 490                 495
89       Asp Arg Ala Ala Lys Pro Val Thr Val Ala Val Lys Met Leu Lys Asp
90                   500                 505                 510
91       Asp Ala Thr Asp Lys Asp Leu Ser Asp Leu Val Ser Glu Met Glu Met
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93       Met Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn Leu Leu Gly Ala
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RAW SEQUENCE LISTING   DATE: 10/15/2004
PATENT APPLICATION: **US/10/734,661A**   TIME: 11:07:01

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Output Set: **N:\CRF4\10152004\J734661A.raw**

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 98                      565                 570                 575
 99      Tyr Ser Phe Asp Thr Cys Lys Pro Pro Glu Glu Gln Leu Thr Phe Lys
100                      580                 585                 590
101       Asp Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly Met Glu Tyr Leu
102                   595                 600                 605
103       Ala Ser Gln Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu
104                610                 615                 620
105       Val Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe Gly Leu Ala Arg
106       625                 630                 635                 640
107       Asp Val His Asn Leu Asp Tyr Tyr Lys Lys Thr Thr Asn Gly Arg Leu
108                   645                 650                 655
109       Pro Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Val Tyr Thr
110                   660                 665                 670
111       His Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe
112                   675                 680                 685
113       Thr Leu Gly Gly Ser Pro Tyr Pro Gly Ile Pro Val Glu Glu Leu Phe
114                690                 695                 700
115       Lys Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro Ala Asn Cys Thr
116       705                 710                 715                 720
117       His Asp Leu Tyr Met Ile Met Arg Glu Cys Trp His Ala Ala Pro Ser
118                   725                 730                 735
119       Gln Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu Asp Arg Val Leu
120                   740                 745                 750
121       Thr Val Thr Ser Thr Asp Glu Tyr Leu Asp Leu Ser Ala Pro Phe Glu
122                755                 760                 765
123       Gln Tyr Ser Pro Gly Gly Gln Asp Thr Pro Ser Ser Ser Ser Ser Gly
124          770                 775                 780
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149 <211> LENGTH: 1147
150 <212> TYPE: DNA
151 <213> ORGANISM: Homo sapiens
152 <300> PUBLICATION INFORMATION:
153 <308> DATABASE ACCESSION NO: m58051
154 <309> DATABASE ENTRY DATE: 1994-11-08
155 <313> RELEVANT RESIDUES: (1)..(1147)
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159       agcagcgcgt cgtggggcga gcggcagaag tcccgggccc agagcccggc cagcaggagc       180
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161       ccatggggcc cactgtctgg gtcaaggatg gcacagggct ggtgccctcg gagcgtgtcc       300
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166       ccgccaacac cgtccgcttc cgctgcccag ccgctggcaa ccccactccc tccatctcct       600
167       ggctgaagaa cggcagggag ttccgcggcg agcaccgcat tggaggcatc aagctgcggc       660
168       atcagcagtg gagcctggtc atggaaagcg tggtgccctc ggaccgcggc aactacacct       720
169       gcgtcgtgga gaacaagttt ggcagcatcc ggcagacgta cacgctggac gtgctggagc       780
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174       acgtcacctt tgaggacgcc ggggagtaca cctgcctggc gggcaattct attgggtttt      1080
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183 <223> OTHER INFORMATION: Expression Vector pCEP-PU/AC7
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187       cgagcaaaat ttaagctaca caaggcaag gcttgaccga caattgcatg aagaatctgc        180
188       ttagggttag gcgttttgcg ctgcttcgcg atgtacgggc cagatatacg cgttgacatt       240
189       gattattgac tagttattaa tagtaatcaa ttacggggtc attagttcat agcccatata       300
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191       cccgcccatt gacgtcaata atgacgtatg ttcccatagt aacgccaata gggactttcc       420
192       attgacgtca atgggtggac tatttacggt aaactgccca cttggcagta catcaagtgt       480
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194       atgcccagta catgacctta tgggactttc ctacttggca gtacatctac gtattagtca       600
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RAW SEQUENCE LISTING   DATE: 10/15/2004
PATENT APPLICATION: **US/10/734,661A**   TIME: 11:07:01

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Output Set: **N:\CRF4\10152004\J734661A.raw**

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199     ctgcttactg gcttatcgaa attaatacga ctcactatag ggagacccaa gctggctagc     900
200     gtttaaactt aagcttggta ccgagctcgg atccccgtcg tgcatctatc gaaggtcgtg     960
201     gagatcccga ggagcccaaa tcttgtgaca aaactcacac atgcccaccg tgcccagcac    1020
202     ctgaactcct ggggggaccg tcagtcttcc tcttcccccc aaaacccaag gacaccctca    1080
203     tgatctcccg gacccctgag gtcacatgcg tggtggtgga cgtgagccac gaagaccctg    1140
204     aggtcaagtt caactggtac gtggacggcg tggaggtgca taatgccaag acaaagccgc    1200
205     gggaggagca gtacaacagc acgtaccggg tggtcagcgt cctcaccgtc ctgcaccagg    1260
206     actggctgaa tggcaaggag tacaagtgca aggtctccaa caaagccctc ccagccccca    1320
207     tcgagaaaac catctccaaa gccaaagggc agccccgaga accacaggtg tacaccctgc    1380
208     ccccatcccg ggatgagctg accaagaacc aggtcagcct gacctgcctg gtcaaaggct    1440
209     tctatcccag cgacatcgcc gtggagtggg agagcaatgg gcagccggag aacaactaca    1500
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211     tggacaagag caggtggcag caggggaacg tcttctcatg ctccgtgatg catgaggctc    1620
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213     ccgtttaaac ccgctgatca gcctcgactg tgccttctag ttgccagcca tctgttgttt    1740
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223     tcttgttcca aactggaaca cactcaacc ctatctcggt ctattctttt gatttataag    2340
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226     caggcagaag tatgcaaagc atgcatctca attagtcagc aaccaggtgt ggaaagtccc    2520
227     caggctcccc agcaggcaga agtatgcaaa gcatgcatct caattagtca gcaaccatag    2580
228     tcccgcccct aactccgccc atcccgcccc taactccgcc cagttccgcc cattctccgc    2640
229     cccatggctg actaattttt tttatttatg cagaggccga ggccgcctct gcctctgagc    2700
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242     tttcacaaat aaagcatttt tttcactgca ttctagttgt ggtttgtcca aactcatcaa    3480
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/15/2004
PATENT APPLICATION: US/10/734,661A   TIME: 11:07:02

Input Set : **N:\AMC\US10734661A.raw**
Output Set: **N:\CRF4\10152004\J734661A.raw**

<u>Please Note:</u>
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:56; N Pos. 256,257,258
Seq#:70; N Pos. 1,2,3
Seq#:74; N Pos. 1,2,3
Seq#:81; N Pos. 1,2,3
Seq#:83; N Pos. 1,2,3

<u>Invalid Line Length:</u>
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 7
Seq#:7; Line(s) 326
Seq#:30; Line(s) 580
Seq#:31; Line(s) 589
Seq#:32; Line(s) 598
Seq#:33; Line(s) 607
Seq#:34; Line(s) 616
Seq#:35; Line(s) 625
Seq#:36; Line(s) 634
Seq#:37; Line(s) 643
Seq#:38; Line(s) 652
Seq#:39; Line(s) 661
Seq#:40; Line(s) 670
Seq#:41; Line(s) 679
Seq#:42; Line(s) 688
Seq#:43; Line(s) 697
Seq#:44; Line(s) 706
Seq#:45; Line(s) 715
Seq#:46; Line(s) 724
Seq#:47; Line(s) 733
Seq#:48; Line(s) 742
Seq#:49; Line(s) 751
Seq#:50; Line(s) 760
Seq#:51; Line(s) 769

PATENT APPLICATION: US/10/734,661A   TIME: 11:07:02

                Input Set : N:\AMC\US10734661A.raw
                Output Set: N:\CRF4\10152004\J734661A.raw

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L:984 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:240
L:1016 M:341 W: (46) "n" or "Xaa" used, for. SEQ ID#:56 after pos.:240
L:1212 M:341 W: (46)· "n" or "Xaa" used, for SEQ ID#:70 after pos.:0
L:1273 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74 after pos.:0
L:1380 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:0
L:1413 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:0
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